## 10/578126 IAP12 Rec'd PCT/PTO 02 MAY 2006

## SEQUENCE LISTING

<110>	Perez, Pascual Gutierrez-Marcos, Jose Dickinson, Hugh	
<120>	MEG1 Endosperm-Specific Promoter and Genes	
<130>	11887*8	
<150> <151>	PCT/EP04/052760 2004-11-04	
<150> <151>		
<160>	6 4	
<170>	PatentIn version 3.2	
<210> <211> <212> <213>	DNA	
<220> <221> <223>	misc_feature	
<400	> 1 agaatt gtaaccttgg gttttcccac acctcaaata gatatggata tagttatata	60
gata	gatata gcaaattcac caaataatat agaggtatag atatagatat aacaaggggt	120
atat	atatag atatagatat atagaagata tagatggata gatagata	180
ataq	ataact tacaattttg totaaaagag actaaatcac tgctaagttt ggtotttggt	240
gaat	acttgc cagtgaattg gttttcgcta tagtatatat ataagtatac actcttctag	300
gatt	atagta tatataagta tacactcttc taggatcggt cgtgaggagt tccttaacat	360
	tgcgac	370
	1> 415 2> DNA 3> Zea mays	
	0> 1> misc_feature 3> promoter Meg1-2	
<40	00> 2 gagetete gacacaggta ggtagtagta gagecagaat tgtaacettg ggtttteeca	60

cacctcaaat agatatagat atagggatat agatagatat agcaaattca ccaaataata	120
cacctcaaat agatatagat atayyyataa ayaara	180
taggggtata gatatagata taagaagggg tatagatata gatatagata tatagaagat	240
atagatagat agatagatat gatagaatag ataacttaca attttgtcta aaagaaacta	300
aatcactgct aagtttggag tagcatatct ttggtgaata cttgctagtg aattggtttc	360
cgctatagta tatatatata agtatacact cttctaggat tatagtatat atatatatat	
aagtatacac tettetagga teaategtga ggagtteatt aaattgtett gegae	415
<210> 3 <211> 376 <212> DNA <213> Zea mays	
<220> <221> misc_feature <223> promoter Meg1-3	
<400> 3 tcgaggtcga cggtatcgat aagcctcaaa tagatataga tatagggata tagatagata	60
tagcaaattc accaaataat ataggggtat agatatagat ataagaaggg gtatagatat	120
agatatagat atatagaaga tatagataga tagataga	180
agatatagat atatagaaga tatagataga tagataga	240
aattttgtct aaaagaaact aaatcactgc taagtttgga gtagcatatc tttggtgaat	300
acttgctagt gaattggttt ccgctatagt atatatatat aagtatacac tcttctagga	360
ttatagtata tatatatata taagtataca ctcttctagg atcaatcgtg aggagttcat	376
aaaattgtct tgcgac	
<210> 4 <211> 121 <212> DNA <213> Zea mays	
<220> <221> misc_feature <223> nucleotides 1 to 121 of promoter Meg1-1	
<400> 4 agccagaatt gtaaccttgg gttttcccac acctcaaata gatatggata tagttatata	60
gatagatata gcaaattcac caaataatat agaggtatag atatagatat aacaaggggt	120
gatagatata gedadeeddo baarin 5 55	121
a	
<210> 5 <211> 414 <212> DNA <213> Zea mays	

<220>
<221> misc_feature <223> MEG1-1 cDNA
<400> 5 cgtgaggagt tccttaacat ttcttgcgac atggagtaca aaaagagggt ggatgcgcta
gtgtttttct ctttacttct cctaggatac tttgctgctc atgcgcatgg ggctgaagaa
ggaattttgc gagaaaaaag agcacaatgc gctcaagggt ttcttccatg caaagataac
aagtgctact gttgcattgg gggccgaact catgattgct actatacgat ggctcagtgt
agtcatgcat gcttctaatc aaaaattaag atcactgttt ttatatacaa tgtaatggta
ggcaatgcta ttaataatac ataagggaat tttagttttg gtattagaat ttttctgatt
gacgaaattt agtcagaccg atactagagg cttaaaaaaaa aaaaaaaaaa
<210> 6 <211> 75 <212> PRT <213> Zea mays
<220> <221> MISC_FEATURE <223> MEG1-1
<pre>&lt;400&gt; 6  Met Glu Tyr Lys Lys Arg Val Asp Ala Leu Val Phe Phe Ser Leu Leu</pre>
Met Glu Tyr Lys Lys Arg var nop 112 10 15
Leu Leu Gly Tyr Phe Ala Ala His Ala His Gly Ala Glu Glu Gly Ile 20 25
Leu Arg Glu Lys Arg Ala Gln Cys Ala Gln Gly Phe Leu Pro Cys Lys 35 40
Asp Asn Lys Cys Tyr Cys Cys Ile Gly Gly Arg Thr His Asp Cys Tyr 50 55
Tyr Thr Met Ala Gln Cys Ser His Ala Cys Phe 65 70 75
<210> 7 <211> 383 <212> DNA <213> Zea mays

<220>

<221> misc\_feature <223> Meg1-2 cDNA

<400> 7
tcggcacgag gctacatgga gtacagaaag agggtggatg cgctagtgtt tttctcgtta 60
cttctcctcg gatactttgc tgctcatgca catgggaagg gtcatgtcac agatgatgtc 120
ggtgtttcta ctccagctaa agaaggaatt atgcaaggaa acggagcacg atgcgttgta 180
gggtttcctc catgcaaaga taacaagtgc tactgctgca ttggggggcg aactcatgct 240
cgctactcta cgatggctga gtgtagacat gcctgcttct aaacacaaat taagatcgct 300
gttattatat acattgtaat ggtaggtaat gctattaata atatatggga attttagttt 360
tggtaaaaaa aaaaaaaaa aaa

<210> 8 <211> 88

<212> PRT

<213> Zea mays

<220>

<221> MISC FEATURE

<223> MEG1-2

<400> 8

Met Glu Tyr Arg Lys Arg Val Asp Ala Leu Val Phe Phe Ser Leu Leu 1 10 15

Leu Leu Gly Tyr Phe Ala Ala His Ala His Gly Lys Gly His Val Thr 20 25 30

Asp Asp Val Gly Val Ser Thr Pro Ala Lys Glu Gly Ile Met Gln Gly 35 40 45

Asn Gly Ala Arg Cys Val Val Gly Phe Pro Pro Cys Lys Asp Asn Lys 50 55

Cys Tyr Cys Cys Ile Gly Gly Arg Thr His Ala Arg Tyr Ser Thr Met 75 80

Ala Glu Cys Arg His Ala Cys Phe

<210> 9

<211> 786

<212> DNA

<213> Zea mays

<220> <221> misc_feature <223> MEG1-3 cDNA	
<400> 9 ggcacgagga ggagttcctt aaattttctt gcgacatgga gtacagaaag agggtggatg	60
cgctagtgtt tttctcgtta ctcctcctca gatactttgc tgctcatgca catgggaagg	120
gtaagtgcta ctgctgcatt gggggcgatg tagggtttcc tccatgcaaa gataacaagt	180
gctactgctg cattgggggg cgaactcatg ctcgctactc tacgctggct gagtgtagtc	240
atgcctgctt ctaaacaaaa attaagatca ctgttattat atacattgta atggtaggta	300
atgctattaa taatatatgg gaattttagt tttggtatta tactttttc caattcacga	360
aataccttct aaaacctggc gtgacaggtg gcatagcagg agtggagggc agcgacggct	420
gcacageget geatgeagtg gettgeattt gtageteete gttggegatg egtgtgegae	480
caagagetet eggeacagae aggteatgte acagatgatg teggagttte tactecaget	540
aaagaaggaa ttatgcaagg aaacggagca cgatgcgatg	600
gataacaagt gctactgctg cattgggggg cgaactcatg ctcgctactc tacgctggct	660
gagtgtagtc atgcctgctt ctaaacaaaa attaagatca ctggtattat atacattgta	720
atgggtaggt aatgctatta ataatatatg ggaatttaag ttttggtatt aaaaaaaa	780
aaaaaa	786
<210> 10 <211> 72 <212> PRT <213> Zea mays	
<220> <221> MISC_FEATURE <223> MEG1-3, first ORF	
<400> 10	
Met Glu Tyr Arg Lys Arg Val Asp Ala Leu Val Phe Phe Ser Leu Leu 1 15	
Leu Leu Arg Tyr Phe Ala Ala His Ala His Gly Lys Gly Lys Cys Tyr 20 25	
Cys Cys Ile Gly Gly Asp Val Gly Phe Pro Pro Cys Lys Asp Asn Lys 35 40 45	

Cys Tyr Cys Cys Ile Gly Gly Arg Thr His Ala Arg Tyr Ser Thr Leu 50 60

<210> 11 <211> 667 <212> DNA <213> Zea mays <220> <221> misc\_feature <223> MEG1-4 cDNA <400> 11 60 ategeogeeg ccaagaceae caccettgee gaateeggea cccatgeeat gtecaettee 120 accaccaagg cccccgccgc caccagcacc gtagccacta ccgccgccaa gaccaccacc 180 gcctttgccg aatccaccac ccatgccatg cccaattcca ccacctttgc catggcctcc 240 acccatgcca tggccaatgt cgcctccgag tccgccacct ttgccatatc caccaccaag 300 gccaccgcct tttcttaaat tgtcttgcga catggagtac agaaagaggg tggatgcgct 360 agtgtttttc tcgttacttc tcctcggata ctttgctgct catgcacatg gaaaggctaa 420 agaaggaatt atgcaaggaa acggagcacg atgcgttgtg gggtttcctc catgcaaaga 480 taacaagtgc tactgttgca ttggggggcg aactcatgct cgctactcta cgatggctga 540 600 gtgtagtcat gcctgcttct aaacaaaaat taagatcgat gttattatat aaattgtaat 660 667 aaaaaaa <210> 12 <211> 76 <212> PRT <213> Zea mays <220> <221> MISC FEATURE <223> MEG1-4 <400> 12 Met Glu Tyr Arg Lys Arg Val Asp Ala Leu Val Phe Phe Ser Leu Leu Leu Leu Gly Tyr Phe Ala Ala His Ala His Gly Lys Ala Lys Glu Gly

Ala Glu Cys Ser His Ala Cys Phe

Ile Met Gln Gly Asn Gly Ala Arg Cys Val Val Gly Phe Pro Pro Cys 35 Lys Asp Asn Lys Cys Tyr Cys Cys Ile Gly Gly Arg Thr His Ala Arg 50 Tyr Ser Thr Met Ala Glu Cys Ser His Ala Cys Phe <210> 13 <211> 621 <212> DNA <213> Zea mays <220> misc\_feature <221> <223> MEG1-5 cDNA tgcagggatg gctggctatg gtgttgatgg tcagcgtatg atgggtgttg ttggtatgga 60 cagcagaggg atgggatatg gtggcagacc tgagccacct cttccgcctg atgcatcaag 120 cactctatat attgagggct tacctgcaaa ctgcacacga cgggaggttt cacatatatt 180 tegeceattt gttggtttte gtgaagtteg tettgteaac aaggagteea gacateetgg 240 tggagatcca catgtgttgt gtttcgtcga ttttgacaac cctgctcagg ctacaattgc 300 tctggaagca ttacaaggtc atgtcacgga tgatgtcaat gtttctgctc cagctgaaga 360 aggaattttg cgagaaaaaa gagcacaatg cgctcaaggg tttcttccat gcaaagataa 420 caagtgctac tgttgcattg ggggccgaac tcatgattgc tactatacga tggctcagtg 480 tagtcatgca tgcttctaat caaaaattaa gatcactgtt tttatataca atgtaatggt 540 aggcaatgct attaataata cataagggaa ttttattttg gtattagaat ttttctgatt 600 621 gacgaaaaaa aaaaaaaaa a <210> 14 <211> 142 <212> PRT <213> Zea mays <220>

7

Met Gly Tyr Gly Gly Arg Pro Glu Pro Pro Leu Pro Pro Asp Ala Ser

MISC FEATURE

<221>

<400> 14

<223> MEG1-5

20 Val Ser His Ile Phe Arg Pro Phe Val Gly Phe Arg Glu Val Arg Leu 35 40 45 Val Asn Lys Glu Ser Arg His Pro Gly Gly Asp Pro His Val Leu Cys Phe Val Asp Phe Asp Asn Pro Ala Gln Ala Thr Ile Ala Leu Glu Ala 70 Leu Gln Gly His Val Thr Asp Asp Val Asn Val Ser Ala Pro Ala Glu Glu Gly Ile Leu Arg Glu Lys Arg Ala Gln Cys Ala Gln Gly Phe Leu Pro Cys Lys Asp Asn Lys Cys Tyr Cys Cys Ile Gly Gly Arg Thr His 115 120 Asp Cys Tyr Tyr Thr Met Ala Gln Cys Ser His Ala Cys Phe 135 <210> 15 <211> 974 <212> DNA <213> Zea mays <220> <221> misc\_feature <223> MEG1-6 cDNA <400> 15 60 tgcggaccca tgtcgttgtg caacgcgtgc gggatccgta ccggaagaag agacgggagc catgggcctc gagtccagca gcaaggccgc caccgccggc ggcagcgagc accagcagca 120 180 qcaqcqqaaq aaqaaqqcca cccqcqcqcg cqgccqcttc ctccaaqcqg gaqaqgqaga 240 gggagcggga gcgggagcgg aacaaggagg cggacgaggt caccgtggag ctccgcggg tggggttcgg caaggaggtg gtgctgaagc agcggcggcg gatgcggcgg aggcgccgcc 300 360 tgggcgagga ggagcgcgcg gccatcctgc tcatggcgct ctcctccggc gtcgtgtacg cctgacttgg ctagcaaccg cgccggcccc cgagacgccg cgcccaaagg cggcgaaagg 420 agaggagggc ccgattcgct ggacgtgcgg catgatctga gccccagaca gatccgtccg 480 540 totggatota tgotaagttt tocoggotaa gtagtagoto gtoggttoga acaaggogag

Ser Thr Leu Tyr Ile Glu Gly Leu Pro Ala Asn Cys Thr Arg Arg Glu

ttaataatcc gtgtccgcgc taggctagca gctctgttcc tctctccccc tcccgttgct	600
tgctgtgttc ttgccaccgc ctcctctagt tgtaatcctg ccgctagtag tgtgctagta	660
gtagctgtcc tgctgtaacc ttctcttgca atgtaaggag agattatatg gttaaaaaca	720
cagatgatgt cagtgtttct actccagcta aagaaggaat tatgcaagga aacggagcat	780
ggtgcgttgt agggtttcct ccatgcaaag ataacaagtg ctactgctgc attggggggc	840
gaactcatgc tcgctactct acgatggctg agtgtagaca tgcctgcttc taaacaaaaa	900
ttaagatcgc tgttattata tacattgtaa tggtaggtaa tgctattaat aatatatggg	960
aattttagtt ttgg	974
<210> 16 <211> 61 <212> PRT <213> Zea mays	
<220> <221> MISC_FEATURE <223> MEG1-6	
<400> 16	
Met Val Lys Asn Thr Asp Asp Val Ser Val Ser Thr Pro Ala Lys Glu 1 5 10 15	
Gly Ile Met Gln Gly Asn Gly Ala Trp Cys Val Val Gly Phe Pro Pro 20 25 30	
Cys Lys Asp Asn Lys Cys Tyr Cys Cys Ile Gly Gly Arg Thr His Ala 35 40 45	
Arg Tyr Ser Thr Met Ala Glu Cys Arg His Ala Cys Phe 50 55 60	
<210> 17 <211> 23 <212> DNA <213> Artificial	
<220> <223> oligonucleotide	
<400> 17 tgctgctcat gcgcatgggg ctg	23
<210> 18 <211> 25 <212> DNA	

```
<213> Artificial
<220>
<223> oligonucleotide
<400> 18
                                                                           25
ttgtatataa aaacagtgat gttaa
<210> 19
<211> 16
<212> PRT
<213> Artificial
<220>
<223> Synthetic peptide
<400> 19
Asn Ala Pro Ala Glu Glu Gly Ile Leu Arg Glu Lys Arg Ala Gln Cys
<210> 20
<211> 27
<212> PRT
<213> Artificial
<220>
<223> Cystein-rich peptide
<220>
<221> MISC_FEATURE
<222> (1)..(27)
<223> Xaa = amino acid
<400> 20
Cys Xaa Xaa Xaa Xaa Cys Tyr Cys Cys Xaa Xaa Xaa Xaa Xaa Xaa
Xaa Tyr Xaa Xaa Xaa Cys Xaa Xaa Cys
            20
<210> 21
<211> 28
<212> DNA
<213> Artificial
<220>
<223> oligonucleotide
<400> 21
                                                                           28
ggatccatga atcccaactt caacagtg
<210> 22
```

<211> 31

<212> <213>	DNA Artificial	
<220> <223>	oligonucleotide	
<400> gaattc	22 ttat cggttatata tctggctctc c	31
<210><211><211><212><213>		
<220> <223>	oligonucleotide	
<400> tgctgc	23 tcat gcgcatgggg ctg	23
<210><211><211><212><213>		
<220> <223>	oligonucleotide	
<400> ttagaa	24 gcak gcatgwctac actsagcc	28
<210> <211> <212> <213>	23 DNA	
<220> <223>	oligonucleotide	
<400> atgcac	25 atgg gaagggtcat gtc	23
<210> <211> <212> <213>	26 28 DNA Artificial	
<220> <223>	oligonucleotide	
<400> ttagaa	26 gcak gcatgwctac actsagcc	28
<210> <211> <212>	27 20 DNA	

<213>	Artificial	
<220>		
<223>	oligonucleotide	
<400>	27	
	cagg agtggagggc	20
<210>	28	
<211>		
<212>		
<213>	Artificial	
<220>		
	oligonucleotide	
<400>		
gaagca	ggca tgactacact c	21
<210>	29	
<211>		
<212>		
<213>	Artificial	
<220>		
<223>	oligonucleotide	
< 400>	20	
<400>	atgt cgcctccgag	20
cggood	acge cycoccogay	
<210>		
<211> <212>		
	Artificial	
<220>	alimanualaatida	
<223>	oligonucleotide	
<400>	30	
ttagaa	gcak gcatgwctac actsagcc	28
<210>	31	
<211>	22	
<212>	DNA	
<213>	Artificial	
<220>		
<223>	oligonucleotide	
<400>	31	~ ~
atggct	ggct atggtgttga tg	22
<210>	32	
<211>	21	
<212> <213>	DNA Artificial	
<b>\</b> /		

<220> <223>	oligonucleotide	
<400> gtgcag	32 tttg caggtaagcc c	21
<210> <211> <212> <213>	25 DNA	
<220> <223>	oligonucleotide	
<400> tgtacg	33 cctg acttggctag caacc	25
<210><211><211><212><213>	28 DNA	
<220> <223>	oligonucleotide	
<400> ttagaa	34 gcak gcatgwctac actsagcc	28
<210> <211> <212> <213>	22 DNA	
<220> <223>	oligonucleotide	
<400> gcaacg	35 tacc gtacctttcc ga	22
<210> <211> <212> <213>	36 24 DNA Artificial	
<220> <223>	oligonucleotide	
<400> acgctg	36 catt caattaccgg gaag	24
<210><211><211><212><212><213>	37 24 DNA Artificial	

<220> <223>	oligonucleotide	
<400> acacct	37 caaa tagatatgga tata	24
<210><211><211><212><213>		
<220> <223>	oligonucleotide	
<400> gttatc	38 tatt ctattctatc atatctatc	29
<210><211><211><212><213>	30	
<220> <223>	oligonucleotide	
<400> gatata	39 gata tatagaagag atatagatgg	30
<210> <211> <212> <213>	29	
<220> <223>	oligonucleotide	
<400> gttatc	40 tatt ctattctatc atatctatc	29
<210> <211> <212> <213>	41 29 DNA Artificial	
<220> <223>	oligonucleotide	
<400> agatag	41 atat gatagaatag atagataac	29
<210> <211> <212> <213>		
<220>		

<223>	oligonucleotide	
	42 tatt ctattctatc atatctatc	29
<210>	43	
<211>		
<212>	DNA	
<213>	Artificial	
<220>		
	oligonucleotide	
	43 tota aagagactaa atcactgo	28
accety	teta aayayaetaa ateaetye	20
<210>		
<211> <212>		
	Artificial	
12157	AL CITICIAL	
<220>		
<223>	oligonucleotide	
<400>	4.4	
	tatt ctattctatc atatctatc	29
,		
.010	45	
<210>		
<211> <212>		
	Artificial	
<220>		
<223>	oligonucleotide	
<400>	45	
acacct	caaa tagatatgga tata	24
<210>	46	
<211>	38	
<212>	DNA	
<213>	Artificial	
<220>		
<223>	oligonucleotide	
<400>	46	2.0
ccaatt	cact gggttatcta ttctattcta tcatatct	38
<210>	47	
<211>	24	
<212>		
<213>	Artificial	
<220>		
<223>	oligonucleotide	

<400> 47 acacctcaaa tagatatgga tata	24
<210> 48 <211> 38 <212> DNA <213> Artificial	
<220> <223> oligonucleotide	
<400> 48 ccaattcact ggccatctat atcttctata tatctata	38
<210> 49 <211> 24 <212> DNA <213> Artificial	
<220> <223> oligonucleotide	
<400> 49 acacctcaaa tagatatgga tata	24
<210> 50 <211> 38 <212> DNA <213> Artificial	
<220> <223> oligonucleotide	
<400> 50 ccaattcact ggccccttgt tatatctata tctatacc	38
<210> 51 <211> 1041 <212> DNA <213> Zea mays	
<220> <221> misc_feature <223> MRP1	
<400> 51 ctgtaacaac ttgtgtagta cttaacccct cgcacctcat gaatcccaac ttcaacagtg	60
tgtggagcgc tcccgagatc aatatgatga actcactcat cactagtcac atcgccaaca	120
acacctacac aaacaacaac cagcatgttg tggcaagtcg tagtgccatt gtgaaccaca	180
ataactttgg gatgccaacg gaggtcgttc cacccgtgga caacatggac atgatgcaag	240
gctatctaat ggctgatacg gatgccatga ggcttgttca gggacaacaa catatgccaa	300

atqttqttcc taatcaaaqq aqqcatqcaq tqaaqttttq qactacagat gagcacagga 360 420 atttccttcg tggtctagaa gtgtttggcc gtggtaaatg gaagaacatc tccaagtact tegtececae aaggacaeca gtgeagatet etageeatge acagaagtat tteegeagge 480 540 aggagtgcac cacagagaaa caacgettta gcatcaacga tgttggcctc tacgacacac agccatgggt gcggcagaac aactcctcta gcagctggga ggcgctcacc ttcactgctg 600 gccqtqcqta caataataca aactactqtq cctttaacaq cctcccqtat gccaqcaqcc 660 720 aggcaagtaa caaccaggta gctacatgga ttacagacca gcaggcaact gcaagttctt 780 ctatagetee tecagegaeg gaggagagee agatatataa eegataatat atataatggt 840 catcagcagc tgggagaggc tttcttcata tataatcaat aggtagatag atatggacaa 900 cgtccattga ctagtttaat ttctatctat atgttttgta tccaatgatg catgtaaaac ctagttggtt gttaaaggtc attagtacca tactatatat gggctagaaa cagtttcatt 960 gaaatttgcc cctgagcaat acaatgaaat tttaccaatg tgttatttat atattaatgt 1020 1041 gtctaaaaaa aaaaaaaaa a

<210> 52

<211> 242

<212> PRT

<213> Zea mays

<220>

<221> MISC FEATURE

<223> MRP1

<400> 52

Met Asn Pro Asn Phe Asn Ser Val Trp Ser Ala Pro Glu Ile Asn Met 1 5 10 15

Met Asn Ser Leu Ile Thr Ser His Ile Ala Asn Asn Thr Tyr Thr Asn 20 25 30

Asn Asn Gln His Val Val Ala Ser Arg Ser Ala Ile Val Asn His Asn 35 40 45

Asn Phe Gly Met Pro Thr Glu Val Val Pro Pro Val Asp Asn Met Asp 50 55 60

Met Met Gln Gly Tyr Leu Met Ala Asp Thr Asp Ala Met Arg Leu Val 65 70 75 80

Gln Gly Gln Gln His Met Pro Asn Val Val Pro Asn Gln Arg Arg His

85 90 95

Ala Val Lys Phe Trp Thr Thr Asp Glu His Arg Asn Phe Leu Arg Gly 100 105 110

Leu Glu Val Phe Gly Arg Gly Lys Trp Lys Asn Ile Ser Lys Tyr Phe 115 120 125

Val Pro Thr Arg Thr Pro Val Gln Ile Ser Ser His Ala Gln Lys Tyr 130 135 140

Phe Arg Arg Gln Glu Cys Thr Thr Glu Lys Gln Arg Phe Ser Ile Asn 145 150 155 160

Asp Val Gly Leu Tyr Asp Thr Gln Pro Trp Val Arg Gln Asn Asn Ser 165 170 175

Ser Ser Ser Trp Glu Ala Leu Thr Phe Thr Ala Gly Arg Ala Tyr Asn 180 185 190

Asn Thr Asn Tyr Cys Ala Phe Asn Ser Leu Pro Tyr Ala Ser Ser Gln 195 200 205

Ala Ser Asn Asn Gln Val Ala Thr Trp Ile Thr Asp Gln Gln Ala Thr 210  $\phantom{\bigg|}215\phantom{\bigg|}220\phantom{\bigg|}$ 

Ala Ser Ser Ser Ile Ala Pro Pro Ala Thr Glu Glu Ser Gln Ile Tyr 225 230 235 240

Asn Arg

<210> 53

<211> 83

<212> PRT

<213> Zea mays

<220>

<221> MISC\_FEATURE

<223> MEG1-3, second ORF

<400> 53

Gln Glu Leu Ser Ala Gln Thr Gly His Val Thr Asp Asp Val Gly Val 20 25 30

40 Asp Val Gly Phe Pro Pro Cys Lys Asp Asn Lys Cys Tyr Cys Cys Ile 55 Gly Gly Arg Thr His Ala Arg Tyr Ser Thr Leu Ala Glu Cys Ser His 75 Ala Cys Phe <210> 54 <211> 16 <212> PRT <213> Artificial <220> <223> peptide <400> 54 Pro Cys Lys Asp Asn Lys Cys Tyr Cys Cys Ile Gly Gly Arg Thr His 10 <210> 55 <211> 23 <212> DNA <213> Artificial <220> <223> oligonucleotide <400> 55 23 gggccaacag ttcctgatta acc <210> 56 <211> 20 <212> DNA <213> Artificial <220> <223> oligonucleotide <400> 56 20 ccccgttgac tgcctcttcg <210> 57 <211> 37 <212> DNA

Ser Thr Pro Ala Lys Glu Gly Ile Met Gln Gly Asn Gly Ala Arg Cys

<213> Artificial

<220> <223> MEG promote:	rs conserved s	equence			
<400> 57 atatagatag atatago	aaa ttcaccaaat	aatatag			37
<210> 58 <211> 1350 <212> DNA <213> Zea mays					
<220> <221> misc_feature <223> MEG1-1 genor	e mic sequence				
<400> 58 ctagttcagt aataggte	gtc gaggtgttct	cagagttcca	gtacttcgac	gagttaggat	60
aggctaggac atcccct	agt cagctgcctg	tggtgggtta	atttacgttg	gcttcgtttc	120
aattctgtgt actttga	tt atattatgta	aattactcta	gtcttttata	ttatttctta	180
ctctttattg ttattcg	ag cattgtgtta	tgatgagtca	tttatgtaat	tgctatgtac	240
gtgagttttg atcctage	cac gtacatggtt	cgcattcggt	ttaccttcta	aaacctgggg	300
tgacaggtgg catagca	gga gtggagggca	gcgacggctg	cacagctctg	cgtgcagtgg	360
cttgcattgt ttgctcc	cg ttggcgatgc	gtgtgcgacc	atgagctctc	gacacaggta	420
ggtagtagta gagccaga	aat tgtaaccttg	ggttttccca	cacctcaaat	agatatagat	480
atagggatat agataga	at agcaaattca	ccaaataata	taggggtata	gatatagata	540
taagaagggg tatagata	ıta gatatagata	tatagaagat	atagatagat	agatagatat	600
gatagaatag ataactt	aca attttgtcta	aaagaaacta	aatcactgct	aagtttggag	660
tagcatatct ttggtga	ata cttgctagtg	aattggtttc	cgctatagta	tatatatata	720
agtatacact cttctage	jat tatagtatat	atatatatat	aagtatacac	tcttctagga	780
tcaatcgtga ggagttca	att aaattgtctt	gcgacatgga	gtacagaaag	agggtggatg	840
cgctagtgtt tttctcg	ta cttctcctcg	gatactttgc	tgctcatgca	catgggaagg	900
gtaagtgaaa actatac	aga catgtgtgtg	catgcttaga	tagatctaga	caatttagaa	960
gatgttatta tatgata	cg tgtgtatcat	ggcgaattgc	taatgtatcg	caatcccctg	1020
tgttaaatta ctcaaata	aat ttcgaatgta	attattctcg	aggcatttgt	tggtaataga	1080
actcttatcc tatacct	ct actaggtcat	gtcacagatg	atgtcagtgt	ttctactcca	1140
gctaaagaag gaattat	jca aggaaacgga	gcacgatgcg	ttgtagggtt	tcctccatgc	1200
aaagataaca agtgcta	tg ctgcattggg	gggcgaactc	atgctcgcta	ctctcgatgg	1260
ctgatgtaga catgcct	yct tctaacaaaa	taagacgttg	tatatatcat	gtatggagga	1320

atttata	aata ttatggaatt agttgtatat	1350
<210> <211> <212> <213>	59 127 DNA Artificial	
<220> <223>	oligonucleotide	
<220> <221> <223>	misc_feature nucleotides 1-127 of promoter MEG1-1	
<400>	59 aatt gtaaccttgg gttttcccac acctcaaata gatatggata tagttatata	60
	tata gcaaattcac caaataatat agaggtatag atatagatat aacaaggggt	120
atatata		127
<210> <211> <212> <213>		
<220> <223>	oligonucleotide	
<400> acaccto	60 caaa tagatatgga tatag	25
<210> <211> <212> <213>	61 25 DNA Artificial	
<220> <223>	oligonucleotide	
<400> gtcgcaa	61 agaa atgttaagga actcc	25
<210> <211> <212> <213>	62 500 DNA Zea mays	
<400>	62 tgga gggcagcgac ggctgcacag ctctgcgtgc agtggcttgc attgtttgct	60
	tggc gatgcgtgtg cgaccatgag ctctcgacac aggtaggtag tagtagagcc	120
	gtaa cettgggttt teccacacet caaatagata tagatatagg gatatagata	180

gatata	gcaa attcaccaaa ta	atataggg	gtatagatat	agatataaga	aggggtatag	240
atataga	atat agatatatag aa	ngatataga	tagatagata	gatatgatag	aatagataac	300
ttacaa	tttt gtctaaaaga aa	actaaatca	ctgctaagtt	tggagtagca	tatctttggt	360
gaatac	ttgc tagtgaattg gt	ttccgcta	tagtatatat	atataagtat	acactcttct	420
aggatta	atag tatatatata ta	tataagta	tacactcttc	taggatcaat	cgtgaggagt	480
tcatta	aatt gtcttgcgac					500
<210> <211> <212> <213>	63 32 DNA Artificial					
<220> <223>	oligonucleotide					
<400>	63 gaat tegeteaagg gt	ttcttcca	tg			32
<210> <211> <212> <213>	64 30 DNA Artificial					
<220> <223>	oligonucleotide					
<400> ggatcc	64 toga goototagta to	eggtetgae				30